

## ABSTRACT

**[00064]** A process for forming an integrated optical device in a glass substrate, comprising the steps of: providing a glass substrate having a base index of refraction; providing a UV light beam; focusing the beam on a portion of the glass substrate in order to form a region of increased refraction; and scanning an elongated region of the glass substrate with the beam in order to define at least one elongated optical channel having an increased index of refraction relative to the base index of refraction, the elongated optical channel for guiding light transmitted there along. The process further includes: forming a plurality of elongated optical channels in said glass substrate, wherein a first optical channel is operative for transmitting light to said plurality of elongated optical channels such that said transmitted light is divided among said plurality of elongated optical channels, thereby forming an optical beamsplitter.